

Appl. No. 09/659,895
 Atty. Docket No. 7885
 Amdt. dated June 9, 2003
 Reply to Office Action of February 7, 2003
 Customer No. 27752

REMARKS

Claims 1 - 6 and 8- 23 are pending in the present application. No additional claims fee is believed to be due.

Claim 7 is withdrawn without prejudice.

Claims 1, 6, 8-10, and 16-23 have been rewritten to more specifically characterize the claimed invention as suggested by the Office Action.

Claim 8 has been amended to correct a typographical mistake regarding the term "R".

It is believed these changes do not involve any introduction of new matter. Consequently, entry of these changes is believed to be in order and is respectfully requested.

The Office Action states an objection to Claim 23 for the following informalities: Claim 23 recites "The process as claimed in Claim 22", wherein Claim 23 should be amended to recite "The compound as claimed in Claim 22". Applicants have amended Claim 23 as suggested by the Office Action.

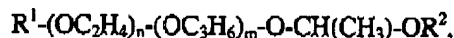
Rejection Under 35 USC 112, First Paragraph

The Office Action States Claims 10, 11, and 13 are rejected under 35 U.S.C. § 112, First Paragraph, for containing heterocycle groups which contain -A=, which are nonenabling when A is either and oxygen or N(R⁸)₁.

Applicants have amended Claim 10, and thereby dependent Claims 11 and 13 to address the rejection under 35 U.S.C. § 112, First Paragraph.

Rejection Under 35 USC 102 Over DE 2,252,186, Beyer et al. and WO 95/13260, Wolf et al.

The Office Action States that Claims 1-7, 12, and 16-23 are rejected under 35 U.S.C. § 102(b) as being anticipated in view of DE 2,252,186 ("Beyer"). Specifically that Beyer discloses a low foaming surfactant with the formula:

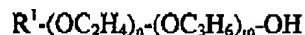


wherein R¹ is a C₇₋₂₂ alkyl or alkenyl group, or a mono or bicyclic alkaryl group having C₈₋₁₂ alkyl group; R² is a C₁₋₁₀ alkyl, cyclohexyl, alkylcyclohexyl, or -(OC₃H₆)_m-(OC₂H₄)_n-R¹; n is 1-30; and m is 5-50. The low foaming surfactant of Beyer is made by reacting a vinyl ether of formula III:

Appl. No. 09/659,895
 Atty. Docket No. 7885
 Amdt. dated June 9, 2003
 Reply to Office Action of February 7, 2003
 Customer No. 27752



with an alkoxyated alcohol of formula II:



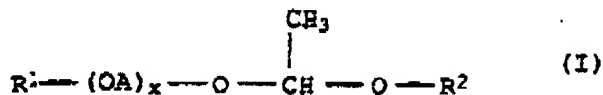
in the presence of a catalyst, such as AlCl_3 , at a temperature between 0-100°C, followed by quenching the mixture with a base, such as KOH or NaOH.

Applicants submit herein a full English translation of DE 2,252,186. Applicants submit that as amended, the claimed invention of the present application claims elements not taught by Beyer. Namely the claimed invention of the present invention defines R^2 as being selected from the group consisting of:

- (i) a 4 to 8 membered substituted, or unsubstituted heterocyclic ring containing from 1 to 3 hetero atoms; and
- (ii) substituted or unsubstituted, partially unsaturated cyclic or aromatic hydrocarbon radicals having from about 4 to about 30 carbon atoms;
- (iii) 7 to 13 membered substituted, or unsubstituted polycyclic ring
- (iv) substituted or unsubstituted cyclic hydrocarbon radical having from 5 to 30 carbon atoms, wherein when the cyclic hydrocarbon radical is an unsubstituted 6 carbon radical or a substituted 7 or 8 carbon radical, R is a linear or branched, saturated or unsaturated, substituted or unsubstituted aliphatic radical having from about 1 to about 5 carbon atoms; and
- (v) substituted or unsubstituted cyclic hydrocarbon radical having from 5 to 30 carbon atoms, wherein when the cyclic hydrocarbon radical is an unsubstituted cyclohexyl radical or a methyl or ethyl substituted cyclohexyl radical, R is a branched, saturated or unsaturated, substituted or unsubstituted aliphatic radical having from about 23 to about 30 carbon atoms.

The Office Action States that Claims 1-7, 12 and 16 are rejected under 35 U.S.C. § 102(b) as being anticipated in view of WO 95/13260 ("Wolf"). Specifically that Wolf, discloses a low-foaming, nonionic surfactant composition having the following formula (I)

Appl. No. 09/659,895
 Atty. Docket No. 7885
 Amdt. dated June 9, 2003
 Reply to Office Action of February 7, 2003
 Customer No. 27752



in which

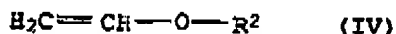
R^1 designates a C_1 to C_{30} alkyl residue, a C_3 to C_{30} alkenyl residue, or a C_7 to C_{30} aralkyl or alkaryl residue,

R^2 signifies a C_1 to C_{10} alkyl residue,

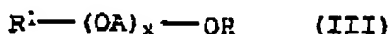
A stands for a 1,2-alkylene group with 2 to 4 C atoms, and

x can assume values of 1 to 50;

prepared by mixing a vinyl ethers of general formula IV

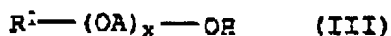


with an alcohol alkoxylate of formula III



in the presence of a Lewis acid catalyst, per the requirements of the instant invention. The Office action further states that Wolf teaches that the reaction temperature is between 30-80 degrees Celsius (page 5, lines 9-16) and that the resulting reaction mixture is neutralized with sodium carbonate (page 10, lines 34-37).

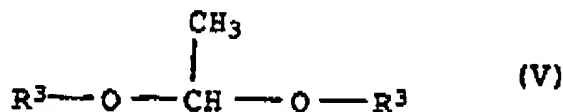
Applicant submit herein a full English translation of WO 95/13260. Applicant submit that the Wolf teaches a process for obtaining formulas (I) and (II) by reacting alkoxylates of general formula III



with vinyl ethers of general formula IV



in the presence of acids as catalysts, whereby the process is characterized by the feature that the reaction is carried out in the presence of one or more acetaldehyde dialkylacetals of general formula (V):



Appl. No. 09/659,896
Atty. Docket No. 7885
Amdt. dated June 9, 2003
Reply to Office Action of February 7, 2003
Customer No. 27752

in which R^3 designates a C_1 to C_{10} alkyl residue, and whereby R^2 and R^3 can have the same or different meanings, using quantities of 0.1 to 20 mol of the compounds V per mol of III. See page 6, line 15 – page 7, line 8 of translation.

The present invention does utilize the acetaldehyde dialkylacetals of formula (V) above.

Additionally, Applicants submit that as amended, the claimed invention of the present application claims elements not taught by Wolf. Namely the claimed invention of the present invention defines R^2 as being selected from the group consisting of:

- (i) a 4 to 8 membered substituted, or unsubstituted heterocyclic ring containing from 1 to 3 hetero atoms; and
- (ii) substituted or unsubstituted, partially unsaturated cyclic or aromatic hydrocarbon radicals having from about 4 to about 30 carbon atoms;
- (iii) 7 to 13 membered substituted, or unsubstituted polycyclic ring
- (iv) substituted or unsubstituted cyclic hydrocarbon radical having from 5 to 30 carbon atoms, wherein when the cyclic hydrocarbon radical is an unsubstituted 6 carbon radical or a substituted 7 or 8 carbon radical, R is a linear or branched, saturated or unsaturated, substituted or unsubstituted aliphatic radical having from about 1 to about 5 carbon atoms; and
- (v) substituted or unsubstituted cyclic hydrocarbon radical having from 5 to 30 carbon atoms, wherein when the cyclic hydrocarbon radical is an unsubstituted cyclohexyl radical or a methyl or ethyl substituted cyclohexyl radical, R is a branched, saturated or unsaturated, substituted or unsubstituted aliphatic radical having from about 23 to about 30 carbon atoms.

Rejection Under 35 USC 103(a) Over DE 2,252,186, Beyer et al. and WO 95/13260, Wolf et al.

Claims 1-7, 12, and 16-23 have been rejected under 35 USC §103(a) as being unpatentable over Beyer. Applicants respectfully traverse this rejection for two reasons. First, Beyer does not establish a *prima facie* case of obviousness because it does not teach or suggest all of Applicants' claim limitations. Therefore, Applicants' content that the claimed invention is unobvious and that the rejection should be withdrawn.

Beyer does not teach or suggest all of Applicants' claim limitations and therefore, does not establish a *prima facie* case of obviousness (see MPEP 2143.03). Specifically, Applicants submit that as amended, the claimed invention of the present application claims elements not taught or

Appl. No. 09/659,895
Atty. Docket No. 7885
Amdt. dated June 9, 2003
Reply to Office Action of February 7, 2003
Customer No. 27752

suggested by Beyer. Namely the claimed invention of the present invention defines R^2 as being selected from the group consisting of:

- (i) a 4 to 8 membered substituted, or unsubstituted heterocyclic ring containing from 1 to 3 hetero atoms; and
- (ii) substituted or unsubstituted, partially unsaturated cyclic or aromatic hydrocarbon radicals having from about 4 to about 30 carbon atoms;
- (iii) 7 to 13 membered substituted, or unsubstituted polycyclic ring
- (iv) substituted or unsubstituted cyclic hydrocarbon radical having from 5 to 30 carbon atoms, wherein when the cyclic hydrocarbon radical is an unsubstituted 6 carbon radical or a substituted 7 or 8 carbon radical, R is a linear or branched, saturated or unsaturated, substituted or unsubstituted aliphatic radical having from about 1 to about 5 carbon atoms; and
- (v) substituted or unsubstituted cyclic hydrocarbon radical having from 5 to 30 carbon atoms, wherein when the cyclic hydrocarbon radical is an unsubstituted cyclohexyl radical or a methyl or ethyl substituted cyclohexyl radical, R is a branched, saturated or unsaturated, substituted or unsubstituted aliphatic radical having from about 23 to about 30 carbon atoms.

Claims 1-7, 12 and 16 have been rejected under 35 USC 103(a) as being unpatentable over Wolf. Applicants respectfully traverse this rejection for two reasons. First, Wolf does not establish a *prima facie* case of obviousness because it does not teach or suggest all of Applicants' claim limitations. Therefore, Applicants' content that the claimed invention is unobvious and that the rejection should be withdrawn.

Wolf does not teach or suggest all of Applicants' claim limitations and therefore, does not establish a *prima facie* case of obviousness (see MPEP 2143.03). Specifically, Applicants submit that as amended, the claimed invention of the present application claims elements not taught or suggested by Wolf. Namely the claimed invention of the present invention defines R^2 as being selected from the group consisting of:

- (i) a 4 to 8 membered substituted, or unsubstituted heterocyclic ring containing from 1 to 3 hetero atoms; and
- (ii) substituted or unsubstituted, partially unsaturated cyclic or aromatic hydrocarbon radicals having from about 4 to about 30 carbon atoms;
- (iii) 7 to 13 membered substituted, or unsubstituted polycyclic ring
- (iv) substituted or unsubstituted cyclic hydrocarbon radical having from 5 to 30 carbon atoms, wherein when the cyclic hydrocarbon radical is an unsubstituted 6 carbon radical

Appl. No. 09/859,895
Atty. Docket No. 7885
Amdt. dated June 9, 2003
Reply to Office Action of February 7, 2003
Customer No. 27752

or a substituted 7 or 8 carbon radical, R is a linear or branched, saturated or unsaturated, substituted or unsubstituted aliphatic radical having from about 1 to about 5 carbon atoms; and

(v) substituted or unsubstituted cyclic hydrocarbon radical having from 5 to 30 carbon atoms, wherein when the cyclic hydrocarbon radical is an unsubstituted cyclohexyl radical or a methyl or ethyl substituted cyclohexyl radical, R is a branched, saturated or unsaturated, substituted or unsubstituted aliphatic radical having from about 23 to about 30 carbon atoms.

Double Patenting Rejection

The Office Action has rejected Claims 1-23 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting in view of copending Application No. 09/663,576.

Applicants will submit a terminal disclaimer to overcome the double patenting rejection of Claims 1-23, if and when the Examiner indicates allowable subject matter.

Conclusion

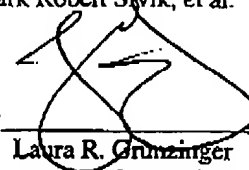
In light of the above remarks, it is requested that the Examiner reconsider and withdraw the rejection under 35 U.S.C. §§ 112, 102, and 103. Early and favorable action in the case is respectfully requested. If, prior to allowance, any outstanding issues exist, Applicants' attorney would welcome the opportunity to resolve such issues via a phone interview.

Applicants have made an earnest effort to place their application in proper form and to distinguish the invention as now claimed from the applied references. In view of the foregoing, Applicants respectfully request reconsideration of this application, entry of the amendments presented herein, and allowance of Claims 1-6 and 7-23.

Appl. No. 09/659,895
Atty. Docket No. 7885
Amdt. dated June 9, 2003
Reply to Office Action of February 7, 2003
Customer No. 27752

Respectfully submitted,
Mark Robert Sivik, et al.

By

A handwritten signature in black ink, appearing to read 'Laura R. Grunzinger', is written over a horizontal line.

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June 9, 2003
Customer No. 27752